

MASTER HVAC MECHANIC

210

DEPARTMENT: County Administration/Facilities Management/Building Maintenance

NATURE OF WORK:

Performs highly skilled technical work involving the installation, servicing, maintenance, and repair of the Heating, Ventilating, (and) Air Conditioning (HVAC), refrigeration, and other mechanical and electrical systems in County buildings.

Work is performed under the general supervision of the HVAC Lead Worker or the Facilities Management Administrator.

ESSENTIAL FUNCTIONS OF THE JOB:

Plans, designs, estimates, installs, services, maintains, and repairs electrical and mechanical devices associated with HVAC, and refrigeration systems, including compressors, condensers, air handling units, boilers, burners, valves, pumps, motors, vents, exhaust fans, hot water heaters, air compressors, ice making machines, and pneumatic and direct digital control systems.

Fabricates and installs sheet metal fittings and duct work as necessary.

Maintains thermostat and temperature settings in all County buildings.

Performs air balancing in County facilities as needed.

Implements the HVAC Preventive Maintenance Program, including replacement of filters, lubrication of units, and adjustment of controls.

Performs work on fire alarm systems and elevators as necessary.

Assures mechanical rooms are clear of all materials not essential in the operation of HVAC systems.

Purchases necessary supplies, materials, tools, and equipment.

Coordinates with all departments and co-workers any repairs or maintenance that cannot be done during regular working days and schedules it as necessary to be completed.

Acquires necessary permits for work to be done to ensure work is completed in accordance with local County codes.

Responds to emergency, after hours, calls for HVAC and electrical systems.

Performs work safely, in accordance with departmental safety procedures and County safety program. Operates equipment safely and reports any unsafe conditions to supervisor.

Performs other related duties as assigned.

JOB LOCATION AND EQUIPMENT OPERATED:

Duties are performed at various County facilities, and requires frequent lifting, climbing, and working at varied heights, and operation of a variety of equipment and hand and power tools.

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Considerable knowledge of national and State safety procedures and standards for heating, air conditioning repair and maintenance.

Considerable knowledge of proper procedures, methods, techniques, and equipment for the maintenance and repair of heating, ventilating, air conditioning, and refrigeration systems.

Ability to diagnose problems and repair or replace a wide variety of heating, ventilating, air conditioning, and refrigeration equipment.

Ability to read and interpret blueprints and schematics.

Thorough knowledge of the safe and effective use of hand and power tools and other equipment of the mechanical trade.

Ability to learn County and Departmental policies, procedures, rules, and regulations.

Ability to exercise independent judgement and make independent decisions.

Ability to work harmoniously with other employees and the general public in an effective and courteous manner.

Ability to follow oral and written instructions.

MINIMUM QUALIFICATIONS:

High school diploma or equivalent, preferably including or supplemented by vocational, technical, or trade school training in mechanical maintenance; extensive experience in the repair and maintenance of HVAC and refrigeration systems; or any equivalent combination of acceptable education and experience providing the knowledge, skills, and abilities cited above.

NECESSARY SPECIAL QUALIFICATIONS:

Possession of a valid Virginia driver's license and have an acceptable driving record based upon James City County's criteria.

Possession of Master Mechanic Certification and certification card for handling refrigerants.

Date: September 2001
mashvacmec.210

IDENTIFICATION OF GENERAL APTITUDES AND PHYSICAL REQUIREMENTS

Position Title: Master HVAC Mechanic

Position Number: 210

Department: Administration

Division: Facilities Management/Building Maintenance

The Americans with Disabilities Act requires that we identify the general aptitudes and physical requirements needed to perform the job listed above. Individuals who have the position must be able to perform all essential job functions unaided or with reasonable accommodation.

I. Mental Abilities: General learning ability. The ability to “catch on” or understand instructions and underlying principles.

- ☒ Ability to understand and follow oral instruction
- ☒ Ability to understand and follow written instruction
- ☒ Ability to guide and/or give instructions
- ☐ Ability to make decisions in accordance with established procedures and policies
- ☐ Not essential to job function

II. Verbal Abilities: Ability to understand meanings of words and ideas associated with them and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.

1. Speaking/Talking:

- ☒ Answering telephone, radio, or switchboard
- ☒ Communicating with County officials
- ☒ Communicating with general public
- ☒ Communicating with vendors
- ☒ Communicating with supervisors and/or with other employees
- ☐ Communicating with others _____
- ☐ Not essential to job function

2. Hearing/Listening:

- ☐ Ability to distinguish between different tones
- ☒ For communication with County officials, public, vendors, supervisors and/or other employees
- ☐ Not essential to job function

3. Reading: (ability to read and understand text)

- ☒ Essential to job function
- ☐ Not essential to job function

III. Numerical: Ability to perform arithmetic operations quickly and accurately.

- ☒ Ability to mentally perform accurate two digit calculations
- ☒ Ability to perform accurate calculations aided
by a calculator, adding machine or measurement device
- ☐ Not essential to job function

IV. Spatial Abilities: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blue print reading and in solving geometry problems. Frequently described as the ability to “visualize” objects of two or three dimensions, or to think visually of geometric forms.

- ☒ Essential function
- ☐ Not essential function

V. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.

1. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use telephone | <input checked="" type="checkbox"/> Manipulate computer keyboard and mouse |
| <input type="checkbox"/> Use switchboard | <input type="checkbox"/> Use postage machine |
| <input checked="" type="checkbox"/> Use radio/console | <input checked="" type="checkbox"/> Use hand tools |
| <input checked="" type="checkbox"/> Use a calculator | <input checked="" type="checkbox"/> Use power tools |
| <input checked="" type="checkbox"/> Use a copy machine | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Use a fax machine | <input type="checkbox"/> Not essential to job function |

2. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately. For example: electrical wiring.

- ☒ Essential to job function
- ☐ Not essential to job function

Explain: _____

VI. Physical Demands:

1. **Strength**: The quality, state or property of being strong. The power to withstand strain, force or stress.

Please check (✓) in appropriate boxes below.

Ability to manipulate materials and/or equipment (lbs)							Frequency of Manipulation		
	5-	5-10	10-15	15-25	25-50	50 +	Occasionally	Frequently	Continuously
Lift						✓		✓	
Push/Pull						✓		✓	
Hold/Carry						✓		✓	

Manipulation done from: ☒ ground to waist ☒ waist level ☒ waist to shoulder ☒ above shoulder
(Check all that apply)

Not essential to job function: ☐ Lift ☐ Push/Pull ☐ Hold/Carry (Check all that apply)

2. **Climbing**: To move up or mount by using the hands or feet.

Ladders

- ☒ Step stool
- ☒ 8' to 10' step ladder
- ☒ Extension ladder
- ☒ Other Scaffolding _____
- ☐ Not essential to job function

Stairways

- ☒ 1 flight
- ☐ 2 flights
- ☐ 3 or more flights
- ☐ Other _____
- ☐ Not essential to job function

Steps

- ☐ 1-2
- ☐ 2-3
- ☒ 4 or more steps
- ☐ Other _____
- ☐ Not essential to job function

3. **Ability to Stand, Sit, Walk, and Run**:

Please check (✓) in appropriate boxes below.

Duration (hours/day)							Occasionally	Frequently	Continuously
	0-1	1-3	3-5	5-7	7-9	9 +			
Stand			✓					✓	
Sit		✓						✓	
Walk		✓						✓	
Run									

If walking or running, over what type of terrain? ☒ flat ☐ rough ☐ both

Not essential to job function: ☐ Stand ☐ Sit ☐ Walk ☒ Run (Check all that apply)

4. Stooping, Kneeling, Crouching, and/or Crawling:

To bend forward or down from the middle of the waist or the middle of the back, to bend downwards, to lower oneself and/or to move freely on hands and knees.

Daily Amounts

- ☐ 0-5x ☐ 5-20x ☒ 20-50x ☐ 50+x
☐ Other _____ ☐ Not essential to job function

5. Reaching, Handling, Fingering, and/or Feeling:

To stretch out, extend, or put forth a bodily part. To touch or grasp something, by extending or stretching. To touch, lift, hold or operate with the hands.

Daily Amounts

- ☐ 0-5x ☐ 5-20x ☐ 20-50x ☒ 50+x
☐ Other _____ ☐ Not essential to job function

6. Seeing: To perceive or comprehend by the sense of sight.

Essential to job function: These characteristics are necessary (Check all that apply)

- ☒ Peripheral vision
☒ Night vision
☒ Focus (distinctness or clarity)
☒ Color perception (discriminate between colors)
☒ Depth perception (determine distance relationship between objects)
☐ Not essential to job function

VII. Driving: The ability to transfer or convey in a vehicle.

Transmission	Standard	Automatic	Multi-Gears
Car	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Small Truck	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Medium Truck	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Large Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Truck w/Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy Bus Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not essential to job function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (list) _____			